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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,131	01/31/2001	Michel Marcel Jose Decre	PHNL000078	5393

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EXAMINER

MARKHAM, WESLEY D

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,131

Applicant(s)

DECRE, MICHEL MARCEL JOSE

Examiner

Wesley D. Markham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Acknowledgement is made of the amendment filed by the applicant on 10/13/2005, in which (1) Claims 15, 16, and 18 were amended, and (2) Claim 20 was added.

Claims 1 – 8 and 15 – 20 are currently pending in U.S. Application Serial No. 09/773,131, and an Office action on the merits follows.

Drawings

2. The formal drawings (2 sheets) filed by the applicant on 1/31/2001 are acknowledged and approved by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. New independent **Claim 20** recites the limitation "the substrates" in line 8 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, Claim 20 requires, in part, "rotating the substrates so that the liquid is spread..." However, only a single substrate (i.e., "a substrate with a first surface and

a periphery” – see line 2 of the claim) is previously recited in Claim 20. Therefore, it is unclear what “the substrates” (plural) refer to in the context of Claim 20, and the scope of the claim is vague and indefinite.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 18 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.
8. Specifically, amended **Claim 18** (from which **Claim 19** depends) requires that the number of parts (at least two) used to form the polygonal shape be equal to half of the number of sides of the polygonal shape. After reviewing the originally filed specification, the examiner finds no support, either explicit, implicit, or inherent, for the aforementioned limitation. The applicant shows a singular example (see Figure 2C) in which the number of parts used to form the shape (i.e., 3 parts) is equal to half of the total number of sides of the polygon (i.e., 6 sides). However, the disclosure of a single example (i.e., a single species) does not provide support for the broad, potentially infinite, genus of structures in which the number of parts is

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equal to half the number of sides of the polygonal shape, as required by Claims 18 and 19. Please note that the written description requirement for a claimed genus may be satisfied by sufficient description of a "representative number of species", which means that the species that are adequately described must be representative of the entire genus. Satisfactory disclosure of a "representative number" depends on whether one of skill in the art would recognize that the applicant was in possession of the necessary common attributes or features of the elements possessed by the members of the genus in view of the species disclosed (MPEP 2163(II)). In this case, a single figure which happens to show a six-sided polygonal extension body having three parts is not a "representative number" of species sufficient to convey to one skilled in the art that the applicant originally had possession of the broad genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as required by Claims 18 and 19.

9. The applicant's arguments filed on 10/13/2005 regarding the 35 U.S.C. 112, first paragraph, rejections have been fully considered but are not persuasive.

Specifically, the applicant argues that Figure 2B shows a square with 2 parts, while Figure 2C shows a hexagon with 3 parts. The applicant concludes that these two examples, plus the original general description of a polygonal shape, support the subject matter of Claims 18 and 19. This argument is not convincing. To begin, the examiner disagrees with the applicant's statement that Figure 2B shows a square with 2 parts. Figure 2B only shows a square made of a single part. As such, the examiner maintains that the original specification only showed a singular example

(see Figure 2C) in which the number of parts used to form the shape (i.e., 3 parts) is equal to half of the total number of sides of the polygon (i.e., 6 sides). This disclosure of a single example (i.e., a single species) does not provide support for the broad, potentially infinite, genus of structures in which the number of parts is equal to half the number of sides of the polygonal shape, as required by Claims 18 and 19.

10. Regarding new independent **Claim 20**, the claim is generally drawn to, “A method of manufacturing an optical storage disc” (see the preamble of the claim), the method comprising a number of steps. As such, the claim is open to manufacturing an optical storage disc of any shape, as opposed to a circular optical storage disc as required by original independent Claim 1. The examiner has thoroughly reviewed the applicant’s originally filed specification and notes that the only optical storage disc shape originally disclosed by the applicant was a circular optical storage disc (see, for example, the Abstract; Figures 2A – 2C; original independent Claim 1; page 1, line 1 (“The invention relates to a method of manufacturing a circular optical storage disc...”); page 4, line 30 (“Using the method according to the invention, a circular optical disc can be manufactured...”); page 5, line 31 (“The circular optical disc substrate...”), etc.). There is no teaching or suggestion in the originally filed specification that the claimed method could or should be used to fabricate an optical storage disc having any shape other than circular. As such, Claim 20 literally reads on embodiments not originally disclosed by the applicant (e.g., making a polygonal

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optical storage disc by using the polygonal extension body in the manner claimed by the applicant), and Claim 20 is not supported, either explicitly, implicitly, or inherently, by the originally filed specification.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 2, 5 – 8, and 15 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (USPN 6,349,086) in view of Konishi et al. (USPN 6,012,858).

13. Regarding independent **Claim 1**, Nishida et al. teaches a method of manufacturing a circular optical storage disc (Col.4, lines 35 – Col.5, line 67; Col.7, lines 3 – 8), the method comprising providing a substrate "2" with a first surface and a periphery, providing a coating on the first surface by applying a liquid resin, rotating the substrate, and UV curing the liquid resin (i.e., solidifying the liquid), and wherein: when applying the liquid onto the first surface, the substrate is present in a separate extension body (i.e., ring "20"), the extension body having substantially circumferential contact with the periphery of the substrate and a surface substantially flush with the first surface of the substrate, and after UV curing of the liquid resin

(i.e., "substantial solidification"), the extension body and the substrate are separated (Figures 12 – 15; Col.11, line 25 – Col.12, line 6). Nishida et al. does not explicitly teach that the extension body comprises at least two parts. However, Konishi et al. teaches an extension body / liquid receiving base comprising at least two parts "32a" and "32b" in contact with the outer peripheral edge of the substrate "W" so that the spin-coating solution may not flow down from between the pair of bases and the substrate (Figure 17, Col.9, lines 51 – 58). It would have been obvious to one of ordinary skill in the art to have used a two-part ring / extension body fitted around the substrate in the method of Nishida et al., upon seeing the apparatus of Konishi et al., with the reasonable expectation of having an easier means for removal of the substrate and the extension body from each other after the spin-coating / curing process (i.e., because the two-part extension body can be separated from the substrate in sections / pieces as opposed to the extension body of Nishida et al., which must be removed as a single piece from the entire periphery of the substrate). The combination of Nishida et al. and Konishi et al. also teaches that the outer periphery of the extension body is circular (**Claim 2**) (Col.11, lines 25 – 30 of Nishida et al.); the two parts of the extension body have surfaces substantially flush with the first surface of the substrate (**Claim 7**) (Figures 12 – 14 of Nishida et al.); the liquid is solidified by exposure to UV light (**Claim 8**) (Col.11, lines 31 – 44 of Nishida et al.); the curing is sufficient so that the coating breaks off at the periphery of the substrate (**Claim 15**) (Figure 15, Col.11, lines 39 – 47 of Nishida et al.); the curing is sufficient so that the separation releases the coating from the extension body (**Claim 16**)

(Col.11, lines 39 – 47 of Nishida et al.); and the two parts of the extension body are congruent (**Claim 17**) (Figure 17 of Konishi et al.). Regarding **Claim 5**, Nishida et al. does not explicitly teach that the surface of the extension body consists of substantially the same material as the substrate of the optical storage disc.

Specifically, Nishida et al. is silent regarding the material used to make ring “20”.

However, in a similar embodiment, Nishida et al. does teach that an optical disc having a slightly larger outer diameter than the outer diameter of the usual substrate can be used so that the excess portion (outer rim) of the substrate can be cut-off in order to eliminate the hump of UV cured coating material on the outer rim (Col.11, line 53 – Col.12, line 6; Figure 16). This teaching clearly suggests to one of ordinary skill in the art that the same material can effectively be used for the optical disc substrate and the means to collect the undesired hump of coating material. It would have been obvious to one of ordinary skill in the art to use a material for the ring “20” that is the same as that of the substrate so that the coating material would desirably flow over the substrate and the ring in the same manner, thereby forming a uniform coating over both surfaces. If this was not the case, and the surface of the ring was made of a different material with different coating material spreading characteristics, the coating material would be expected to either bead-up at the edge of the substrate or flow onto and over the edge of the extension body too quickly, thereby forming a non-uniform coating and negating the purpose of the extension body.

Regarding **Claim 6**, Nishida et al. does not explicitly teach that the material of the ring / extension body consists of a material to which the coating adheres relatively

poorly. Specifically, Nishida et al. is silent regarding the material used to make the extension body. However, Nishida et al. does teach that the UV cured resin (i.e., the coating) is removed from the extension body "20" (Col.11, lines 39 – 47). Therefore, it would have been obvious to one of ordinary skill in the art to use an extension body made of a material to which the coating of Nishida et al. adheres poorly so that the extension body can be easily cleaned (i.e., the UV cured resin on the extension body can be easily removed), thereby facilitating its use in subsequent optical disc coating processes.

Response to Arguments

14. Applicant's arguments filed on 10/13/2005 and regarding the 103 rejections based on the combination of Nishida and Konishi have been fully considered but they are not persuasive.
15. Specifically, the applicant argues that (1) a resist solution, as taught by Konishi, is not a coating, (2) the extension body of Konishi is used to catch flying solutions during spinning, and (3) the combination of Nishida and Konishi is based on impermissible hindsight.
16. In response, this argument is not convincing. Regarding issue (1), the examiner maintains that a "resist solution" as taught by Konishi clearly implies a solution that is intended to form a coating on the substrate, especially in view of Konishi's teaching that a photoresist is coated on a wafer surface (Col.1, lines 8 – 10). Regardless, the overall disclosure of Konishi is directed towards spinning a substrate and forming a

liquid film having a high uniformity thereon (see, for example, the Abstract, Col.1, lines 5 – 7, and Col.9, lines 59 – 67). Therefore, the Konishi reference is clearly relevant to the art of spin coating a substrate to form a uniform film thereon, as claimed by the applicant and disclosed by the Nishida reference. Regarding issue (2), the applicant's argument that the extension body of Konishi is used to catch flying solutions during spinning is simply conjecture and is not supported by the teachings of Konishi. Specifically, Konishi teaches that the structures "32a" and "32b" are a pair of liquid receiving bases. As such, the structures of Konishi function in the same manner as the applicant's claimed extension body and the extension ring of Nishida (i.e., to receive liquid that is spun-off of the substrate). Regarding issue (3), the examiner maintains that one of ordinary skill in the art, looking at the Nishida and Konishi references, would have been motivated to perform the applicant's claimed process. Please note that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Nishida et al. teaches all the limitations of the claimed method except for an extension body comprising at least two parts. However, Konishi et al. teaches an extension body / liquid receiving base comprising at least two parts "32a" and "32b" in contact with the outer peripheral edge of the substrate

“W” so that the spin-coating solution may not flow down from between the pair of bases and the substrate (Figure 17, Col.9, lines 51 – 58). It would have been obvious to one of ordinary skill in the art to have used a two-part ring / extension body fitted around the substrate in the method of Nishida et al., upon seeing the apparatus of Konishi et al., with the reasonable expectation of having an easier means for removal of the substrate and the extension body from each other after the spin-coating / curing process (i.e., because the two-part extension body can be separated from the substrate in sections / pieces as opposed to the extension body of Nishida et al., which must be removed as a single piece from the entire periphery of the substrate).

Allowable Subject Matter

17. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 18 – 20 have been rejected under 35 U.S.C. 112, first and/or second paragraph(s), for the reasons set forth above, but no prior art has been applied against the claims.
18. Specifically, the applicant's arguments regarding the functional advantages of a polygonal extension body (see page 8 of the arguments filed on 10/13/2005) in the context of the claimed method of manufacturing a circular optical storage disc are convincing. While the prior art of record teaches using a ring shaped (i.e., circular) extension body in the method of manufacturing a circular optical disc (see Nishida et

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al.), as well as suggesting that other extension body shapes (e.g., square, rectangle) can be used in other spin coating processes (see Konishi and Boeckl), the prior art of record does not teach or reasonably suggest that a polygonal extension body would be superior to a circular extension body in the claimed process of manufacturing a circular optical storage disc (e.g., by further reducing the hump of coating material on the periphery of the circular optical storage disc – see page 3, lines 27 – 33, page 8, and Figure 3 of the applicant's specification).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D. Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


WDM

Wesley D Markham
Examiner
Art Unit 1762


TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER